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[\[ Printable version \]](#)**(WO/2005/107324) INDUCTION HEATING COIL AND INDUCTION HEATING METHOD FOR MULTI-STEP SHAFT MEMBER**

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**Title:** INDUCTION HEATING COIL AND INDUCTION HEATING METHOD FOR MULTI-STEP SHAFT MEMBER

**Abstract:** An induction heating coil and an induction heating method for a multi-step shaft member (W). In the heating coil, annular conductors having inner diameters separated a specified distance from the outer periphery of the heating part of the heated shaft member are axially disposed in the split state in multiple parts, the axial lengths of the annular conductors (1), (2), and (3) are set so that the allotted areas of the heating parts thereof are approximately equal to each other, and the plurality of annular conductors are connected in series so that the stepped shaft parts of the heated shaft member can be uniformly heated. The plurality of annular conductors are formed according to the shapes of the heating parts of the shaft member and may be formed to ride over the shaft stepped parts with different outer diameters of the heated shaft member by shaping. Annular projected parts are formed at the portions of the annular conductor corresponding to the roots of the shaft stepped portions of the heated shaft member.